

AMENDMENTS TO THE CLAIMS:

1. (Previously presented) A predictive model method, comprising:

receiving first input data into an initial model to develop an initial model output; and receiving second input data and said initial model output as inputs into a first boosting stage to develop an improvement to said initial model output, said second input data comprising one of said first input data, data not included in said first input data, and a combination thereof.

2. (Previously presented) The method of claim 1, further comprising:

providing an output of said first boosting stage as an input into a second boosting stage.

3. (Previously presented) The method of claim 1, further comprising:

successively providing, for one or more additional boosting stages, an output of a preceding boosting stage as an input into a succeeding boosting stage.

4. (Previously presented) The method of claim 1, wherein said first boosting stage comprises a transform/regression stage that comprises:

a feature transform stage receiving said second input data and said initial model output;
a linear regression stage receiving an output of said feature transform stage; and
an output summing node receiving as inputs said initial model output and an output of said linear regression stage, an output of said output summing node comprising a first boosting stage model output.

5. (Previously presented) The method of claim 4, further comprising:
 - successively providing, for one or more transform/regression stages, an output of a preceding transform/regression stage as an input into a succeeding transform/regression stage.
6. (Previously presented) The method of claim 5, wherein for at least one said one or more transform/regression stages, a third input into said succeeding transform/regression stage comprises an output of said linear regression stage of a preceding transform/regression stage.
7. (Previously presented) The method of claim 5, further comprising:
 - avoiding an overfitting in said predictive model by determining when a successive transform/regression stage does not add to a performance of said predictive model.
8. (Original) The method of claim 7, wherein said determining of performance degradation comprises a holdout method, said holdout method comprising:
 - dividing an available data into a training set and a holdout data set;
 - using said training set to estimate a model parameter and to construct an alternative model structure; and
 - using said holdout data set to make a selection among said alternative model structure.
9. (Original) The method of claim 7, wherein said determining of performance degradation comprises a cross-validation method, said cross-validation method comprising:
 - dividing an available data into a plurality of folds of data; and

successively, using each said fold as a holdout data set, and a remaining data not in said fold is used as a training data set to estimate model parameters and to construct alternative model structures and said training data set is used to make a selection among said alternative model structures.

10. (Previously presented) A predictive modeling method, comprising:
 - establishing an initial model module to instance an initial model; and
 - establishing a boosting stage model module to instance a boosting stage model for each of one or more successive boosting stages,
 - wherein at least one instanced boosting stage model receives, as input, an input data and an output from at least one of said initial model and a preceding boosting stage model.

11. (Previously presented) The method of claim 10, wherein at least one said boosting stage model feeds forward a second output as another input into at least one succeeding boosting stage model.

12. (Previously presented) The method of claim 10, further comprising:
 - instancing said initial model;
 - successively instancing one or more of said boosting stage models to be successive boosting stage models, wherein at least one said boosting stage model receives, as input, an output from at least one of said initial model and a preceding boosting stage model;
 - providing an input data as input to said initial model; and

for each successive boosting stage model, providing an input data as input to said successive boosting stage model.

13. (Previously presented) The method of claim 12, further comprising:
determining when an additional successive boosting stage would not add to a performance of the predictive model.

14. (Original) The method of claim 13, wherein said determining of performance degradation comprises a holdout method, said holdout method comprising:
dividing an available data into a training set and a holdout data set;
using said training set to estimate a model parameter and to construct alternative model structures; and
using said holdout data set to make a selection among said alternative model structures.

15. (Original) The method of claim 13, wherein said determining of performance degradation comprises a cross-validation method, said cross-validation method comprising:
dividing an available data into a plurality of folds of data;
successively, using each said fold as a holdout data set, and a remaining data not in said fold is used as a training data set to estimate model parameters and to construct alternative model structures and said training data set is used to make a selection among said alternative model structures.

16. (Previously presented) The method of claim 10, wherein said boosting stage model comprises:

- a first data input port;
- a second data input port;
- a feature transform stage receiving data from said first data input port and said second data input port;
- a linear regression stage receiving an output from said feature transform stage;
- a summing node receiving data from said first data input port and output data from said linear regression stage; and
- an output port receiving data outputted from said summing node.

17. (Previously presented) The method of claim 16, wherein said boosting stage model further comprises:

- a second output port to provide said output data from said linear regression stage to be a second output from said boosting stage model; and
- one or more input ports to receive data from said second output port of preceding boosting stages to be input data into said feature transform stage.

18. (Previously presented) An apparatus to perform a predictive modeling method, said apparatus comprising:

- an initial model module to instance an initial model; and
- a boosting stage model module to instance a boosting stage model for each of one or more successive boosting stages,

wherein at least one said boosting stage model receives a data input and an input from a preceding boosting stage model.

19. (Previously presented) The apparatus of claim 18, further comprising:

a controller to cause said initial model and each of one or more said successive boosting stage models to be instanced and to interconnect said initial model and said plurality of successive boosting stage models; and

a graphic user interface to allow a user to control said controller and said predictive modeling method, to input data into said initial model, and to one of display and print to one of a printer, a data file, and an application program the output of a final one of said successive boosting stage models.

20. (Previously presented) A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a predictive modeling method, said instructions comprising:

an initial model module to instance an initial model; and

a boosting stage model module to instance a boosting stage model for each of one or more successive boosting stages,

wherein at least one instanced boosting stage model receives, as input, a data input and an output from at least one of said initial model and a preceding boosting stage model.

21. (Previously presented) The signal-bearing medium of claim 20, wherein said instructions further comprise:

causing said initial model and each of one or more said successive boosting stage models to be instanced and to appropriately interconnect said initial model and said successive boosting stage models;

allowing a user to control said controller and said predictive modeling method, to input data into said initial model, and to one of display and print to one of a printer, a data file, and an application program the output of a final one of said successive boosting stage models;

receiving input data; and

allowing an output data of said predictive modeling method to be provided as output data.

22. (Previously presented) A method of providing a service, said method comprising at least one of:

providing an execution of a predictive modeling method, wherein said predictive modeling method comprises:

establishing an initial model module to instance an initial model; and

establishing a boosting stage model module to instance a boosting stage model for each of one or more successive boosting stages, wherein at least one instanced boosting stage model receives, as input, an input data and an output from at least one of said initial model or a preceding boosting stage model.

23-24. (Canceled)

25. (Previously presented) A method of determining performance degradation in an iterative predictive modeling, said method comprising:

dividing an available data into a plurality of folds of data;

for each said fold, instancing an iterative predictive modeling method and associating it with said fold;

successively, using each said fold within the iterative predictive modeling method associated with that fold as a holdout data set, and a remaining data not in said fold is used as a training data set to estimate model parameters, and to construct alternative model structures and said training data set is used to make a selection among said alternative model structures.

26. (Original) A method for deploying computing infrastructure, comprising integrating computer-readable code into a computing system, wherein the code in combination with the computing system is capable of performing the method of claim 1.